ARTBOTICS

Programming with Arduino

Reacting to Sensors
Arduino Proto Shield

Shield on top of the Arduino that can control sensors

- Digital pins (0 – 13)
- 5V Rail
- Ground Rail
- Analog pins (0 – 5)
- Digital pins (14 – 19)
Reacting to Sensors

**Button**
- Boolean, on/off
- Pressed = True
- Unpressed = False

**Range Sensor**
- Variable, 0 – 1023
- Closer = higher value
- Further = lower value

**Light Sensor**
- Variable, 0 – 1023
- Lighter = higher value
- Darker = lower value

**Hookup wires**

**Resistor**
Button

Boolean value: true or false, on or off
Range Sensor

Variable; far - close
Light Sensor

Variable; light - dark
Reacting to Sensors

- Each sensor uses three hookup wires that plug into the proto shield

- The “Reacting to Sensors” handout will show you how to plug in each sensor

- We encourage you to experiment with all three sensors! Find the right one to use with your project
Reacting to Sensors

Button button(pin);
if(button.getButtonState()) {commands}

Sensor rangeSensor(pin);
Serial.print(rangeSensor.getReading());
if(rangeSensor.getReading() >= 300) {commands}

Sensor lightSensor(pin);
Serial.print(lightSensor.getReading());
If(lightSensor.getReading() <= 100) {commands}